



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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January 21, 2010

Mr. Raleigh Bland
Regulatory Division
U.S. Army COE
Wilmington District
P.O. Box 1890
Wilmington, NC 28402-1890

**Subject: Comments on the Draft Environmental Impact Statement (DEIS) for the
Town of Nags Head, Beach Nourishment Project in Dare County, NC
(CEQ Number: 20090418, ERP Number: COE-E39078-NC)**

Dear Mr. Bland:

Pursuant to Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the Draft Environmental Impact Statement (DEIS) for the Town of Nags Head Beach Nourishment Project (CEQ Federal Register Date: 12/11/2009), located in Dare County, NC. We previously provided scoping comments (letter dated June 3, 2009) for this project. We understand that the U.S. Army Corps of Engineers (COE), Wilmington District, Regulatory Division, has received a request for Department of the Army authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, from the Town of Nags Head to dredge up to 4.6 million cubic yards of beach-quality sandy material from an offshore borrow source, and deposit the material along approximately 10 miles of ocean shoreline in the Town of Nags Head.

We further understand that the applicant (the Town of Nags Head) proposes to utilize a self contained hopper dredge during a proposed construction window from April through September 2010 to undertake the dredging operations and discharge the sand on the beach via submerged pipeline. In addition, the applicant's proposed offshore borrow area (Offshore Area S1) includes sites identified in the U.S. Army Corps of Engineers, Wilmington District's previous EIS, entitled "Final Feasibility Report and Environmental Impact Statement on Hurricane Protection and Beach Erosion Control" (dated September 2000). The Town of Nags Head's beach nourishment project will be funded by a combination of local, county, and/or state sources, and no federal funds will be used for this project.

It is our understanding that the proposed Nags Head project requires approvals from Federal and State agencies under both the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA), and thus this joint Federal and

State Environmental Impact Statement (EIS) is being prepared. The COE is serving as the lead agency for the process, and the final EIS will serve as the NEPA document for the COE (404 permit) and the SEPA document for the State of North Carolina (401 permit). EPA notes that the applicant appropriately considered three alternatives, and these are fully addressed in the DEIS:

1. The “No Action Alternative” - - meaning that existing property would be abandoned as erosion naturally encroaches over time on buildings and the community’s infrastructure.
2. The “Relocation Alternative” - - meaning that threatened structures and infrastructure would be fully relocated where needed.
3. The “Beach Nourishment Alternative” - - meaning the beach will be restored and therefore recreational areas lost to erosion will be provided greater separation between the existing properties and the ocean.

EPA has reviewed the DEIS and found that the following required information has appropriately been provided:

- Based upon the proposed impacts to waters of the United States, the Town of Nags Head, and their consultant, Coastal Science & Engineering, appropriately pursued the Environmental Impact Statement (EIS) route for the proposed Project, and the draft version (DEIS) we reviewed appropriately includes these NEPA-required elements: Alternatives analyses, affected environment, environmental consequences, and identification of direct, secondary, and cumulative environmental impacts.
- The project is located off Old Oregon Inlet Road and South Croatan Highway 158, adjacent to the Atlantic Ocean, in the Town of Nags Head, Dare County, NC, and totals slightly over 10 miles of ocean shoreline beginning approximately 1 mile from the town’s northern corporate limit (border with the Town of Kill Devil Hills) and extending south to the town’s corporate limit adjacent to the Cape Hatteras National Seashore.
- The proposed borrow area (Offshore Area S1) is located in the Atlantic Ocean approximately 2–3 miles offshore of the project site (maps have been provided in the DEIS). The potential borrow area consists of 3 subareas, and selection of the portions of these subareas to be utilized will be made in coordination with the COE so as to avoid federal environmental monitoring stations. Only a portion of these subareas (1, 2, or 3) will be used for the proposed project. The undisturbed subareas will be left for future projects.
- The Town of Nags Head encompasses a total of approximately 11 miles of ocean shoreline on a barrier island located at the northern end of North Carolina’s Outer Banks. The width of the berm of the island’s dune system varies considerably with location along the town’s beach and with the season.
- Along most of the project area, the winter berm is practically nonexistent due to sustained severe erosion processes, and dune habitat has been noted to be decreasing due to excessive erosion of the base (toe) of the dunes by waves “that travel unimpeded over previously eroded wet beach” to directly impact these

important dunes. The DEIS documents continuing losses totaling about 2 million cubic yards between 1994 and 2009.

- The Town of Nags Head proposes to excavate approximately 4.6 million cubic yards of “beach-quality” sandy material from an offshore borrow source, and deposit the material along approximately 10 miles of ocean shoreline owned by the Town of Nags Head.
- The purpose and need of the proposed action is appropriately identified in the DEIS as nourishing the Town of Nags Head’s ocean shoreline to restore a protective beach and to replace sand lost during a period of delay in the implementation of the Federal Dare County Hurricane Protection and Beach Erosion Control Project (as developed by the COE in 2000). The DEIS states that the proposed project is intended “to restore the eroded beach to a condition that would be able to sustain chronic erosion and the short-term impact of storms until the federal project occurs; protect upland property, infrastructure, and tax base; and expand recreation opportunities for all citizens of Dare County.”
- The proposed borrow area includes portions of offshore areas appropriately identified by the COE in the 2000 Federal Dare County Project. The anticipated optimal equipment for the required excavations will include ocean-certified, self-contained hopper dredges. This equipment will typically be used to excavate shallow trenches (approximately 2–3 foot sections) in each pass (leaving narrow undisturbed areas at the margin of each cut), then travelling to a buoyed pipeline anchored close to shore. Discharge to the beach will be via a submerged pipeline across the surf zone, then by way of a shore-based pipe system positioned along the dry beach. The DEIS notes that only a small portion of borrow area S1 will be required to provide up to 4.6 million cubic yards of beach quality material.
- The proposed borrow area has been sampled and tested for beach compatibility. Water depths in the borrow area are approximately 40-55 feet. As noted in the DEIS, geotechnical investigations have confirmed the quality of the sandy material in the borrow area. Subareas 1, 2, and 3 potentially contain about 13.5 million cubic yards of beach-quality sediment, and overall, S1 potentially contains about 100 million cubic yards of beach-quality material. Sediment characterization for 14 recipient beach transects along Nags Head, North Carolina showed an average sand content of 96.1%, and only 0.1% fines (silt, clays, mud <0.0625 mm).
- The applicant is appropriately coordinating the specific area for use in the proposed project with the COE with the following understanding: (1) The final borrow area required for the beach nourishment project can be limited to the equivalent of a 0.9 square-mile (approximately 575 acres) area, (2) the borrow area used will be contiguous rather than a series of small impact areas, (3) once used, the borrow area will no longer be available for use, consistent with the Dare County Project, and (4) the borrow area will be fully delineated in order to avoid active biological monitoring stations established by the COE as part of the Dare County Project.
- The project will be built in approximate 1–2 mile sections, with a goal of optimizing the alignment and disposition of pipeline. Sections will be pumped into place with the aid of temporary dikes created by bulldozers operating in the

surf zone, and daily operations will impact approximately 500–1,000 linear feet of shoreline as work progresses in either direction from the submerged pipeline. Upon completion of a particular section, the submerged pipeline and beach-building equipment will be shifted to the adjacent next section.

- As construction progresses, sections will be appropriately graded to final design contours with a focus on eliminating any low areas, and then opened for recreational use by the public. Support equipment “will be shifted out of completed sections as soon as practicable, so that construction activities in a particular reach will disrupt normal beach use for only a month or so” at any particular locality. The finished sections will be allowed to adjust through natural processes for several months, and will include the placement of dune fencing and/or dune plantings as needed or required.
- This EIS process appropriately included a Scoping Process, including a public scoping meeting that was held on April 28, 2009, as well as a period of solicitation of public and agency comments for input in the preparation of the DEIS. The scoping meeting was reportedly well attended by the public, as well as representatives from local, State, and Federal governmental agencies. EPA Region 4 made scoping comments (June 3, 2009) for incorporation into the Draft DEIS.
- The DEIS appropriately notes that COE has coordinated with the North Carolina Division of Coastal Management, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service in the development of the DEIS to ensure the process complies with State Environmental Policy Act (SEPA) requirements, as well as the NEPA requirements. The DEIS appropriately consolidates both NEPA and SEPA processes.
- EPA understands that the State of North Carolina administers the Coastal Zone Management Permit process.
- Surface waters and jurisdictional wetland areas have appropriately been identified for the proposed project site. Field reviews of the project area have revealed that there are no vegetated freshwater or coastal wetlands located in the project area.

EPA's Specific Comments on the DEIS

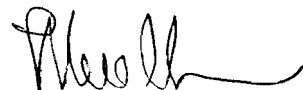
- Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14(a)) require an EIS to “rigorously explore and objectively evaluate all reasonable alternatives” for a proposed action. The regulations (40 CFR 1502.14(b)) further require that substantial treatment be made of each alternative considered in detail, including the proposed action. This DEIS appropriately includes an extensive Alternatives Analysis that was performed and then reviewed for technical accuracy. This analysis appropriately included the evaluation of (1) a “no action” alternative, (2) a “retreat and relocate” alternative (e.g., abandon property, retreat, and relocate) (3), and the preferred alternative. The DEIS also appropriately describes the preliminary alternatives that were identified and evaluated throughout the scoping process, and includes detailed descriptions of all of these.
- CEQ regulations (40 CFR 1502.15) require an EIS to describe the environment of the areas to be affected (or created) by the alternatives under consideration. The

data and analysis in this DEIS was found to be commensurate with the importance of the impacts, although EPA still has some concerns about the potential impacts from use of a hopper dredge on marine threatened and endangered resources (e.g., potential for entrainment of sea turtles associated with hopper dredges).

- When the final borrow area is selected, EPA requests notification including detailed map(s) of this area. The borrow area should be fully delineated in order to avoid active biological monitoring stations established by the COE as part of the Dare County Project. EPA concurs with the DEIS statement that, once used, the borrow area will no longer be available for future use.
- The project should be coordinated (to avoid conflicts) with monitoring efforts led by the North Carolina Recreational Water Quality Program (RWQ), which regularly tests these coastal waters in order to protect public health by monitoring and notifying the public when bacteriological standards for safe bodily contact are exceeded. Also, the project should be coordinated with the North Carolina Department of Environmental and Natural Resources, Division of Environmental Health, Shellfish Sanitation Section, which also is continually monitoring and classifying these coastal waters as to their suitability for shellfish harvesting for human consumption.
- The final EIS should include geotechnical information, especially representative boring logs and/or grain size analysis plots from soil borings conducted in the finalized borrow area.
- Proposed mitigation measures are outlined in the DEIS (given in detail in the attachments), and appropriately include specific measures recommended by USFWS and NMFS for protection of threatened and endangered species. The finalized mitigation plan should be provided to EPA. Also, EPA requests that we be provided the specific finalized protocols to be employed should any sea turtles be encountered during the dredging activity. EPA concurs with USFWS (Biological Opinion dated August 18, 2008) that a work schedule that avoids the seas turtles' nesting and hatching period is beneficial (e.g., the cool weather months).

Thank you for the opportunity to provide comments on this DEIS. Because of our concerns about the use of hopper dredges and the potential effects on marine and threatened and endangered resources, we rate this DEIS as EC-2, meaning we have some environmental concerns and have requested the finalized information be provided in the FEIS (the finalized mitigation plan, the finalized sea turtle protocol, the map of the final borrow areas, and some representative boring logs from the selected final borrow areas). If you wish to discuss these comments or have any other questions, please contact me at (404) 562-9611 (mueller.heinz@epa.gov) or Paul Gagliano, P.E., of my staff at (404) 562-9373 (gagliano.paul@epa.gov).

Heinz J. Mueller, Chief



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